

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ1081TVP01

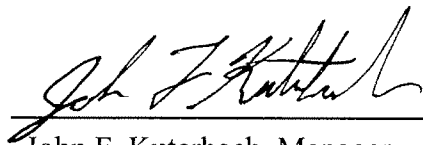
Issue Date: May 1, 2008
Expiration Date: June 2, 2013

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Insulfoam LLC**, for the operation of the **Insulfoam Facility**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

This operating permit becomes effective June 2, 2008.



John F. Kuterbach, Manager
Air Permits Program

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List of Abbreviations Used in this Permit

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AS	Alaska Statutes
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BHp	Boiler Horsepower
C.F.R.	Code of Federal Regulations
The Act	Clean Air Act
CO	Carbon Monoxide
dscf	Dry standard cubic foot
EPA	US Environmental Protection Agency
EU	Emission Unit
gr/dscf	Grain per dry standard cubic foot (1 pound = 7000 grains)
GPH	Gallons per hour
HAPs	Hazardous Air Pollutants [<i>HAPs</i> as defined in AS 46.14.990(14)]
ID	Emission Unit Identification Number
kPa	KiloPascals
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology as defined in 40 C.F.R. 63.
MR&R	Monitoring, Recordkeeping, and Reporting
NESHAPs	Federal National Emission Standards for Hazardous Air Pollutants [<i>NESHAPs</i> as contained in 40 C.F.R. 61 and 63]
NO _x	Nitrogen Oxides
NSPS	Federal New Source Performance Standards [<i>NSPS</i> as contained in 40 C.F.R. 60]
O&M	Operation and Maintenance
O ₂	Oxygen
PAL	Plantwide Applicability Limitation
PM-10	Particulate Matter less than or equal to a nominal ten microns in diameter
ppm	Parts per million
ppmv, ppmvd	Parts per million by volume on a dry basis
psia	Pounds per Square Inch (absolute)
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
S	Sulfur
SIC	Standard Industrial Classification
SO ₂	Sulfur dioxide
TPH	Tons per hour
TPY	Tons per year
VOC	Volatile organic compound [<i>VOC</i> as defined in 40 C.F.R. 51.100(s)]
VOL	Volatile organic liquid [<i>VOL</i> as defined in 40 C.F.R. 60.111b, Subpart Kb]
vol%	Volume percent
wt%	weight percent

Section 1. Stationary Source Information

Identification

Names and Addresses

Permittee:	Insulfoam LLC 1019 Pacific Avenue, Suite 1501 Tacoma, WA 98402
Stationary Source Name:	Insulfoam Facility
Location:	61.226112° North Latitude; 149.891292° West Longitude
Physical Address:	Insulfoam Facility 628 Western Drive Anchorage, AK 99501
Owner/Operator:	Insulfoam LLC 1019 Pacific Avenue, Suite 1501 Tacoma, WA 98402
Permittee's Responsible Official and Billing Contact:	Mr. James R. Johnson Insulfoam LLC 1019 Pacific Avenue, Suite 1501 Tacoma, WA 98402 (800) 248-5995
Stationary Source and Permit Contact:	Mr. Shawn Osler Insulfoam LLC 1019 Pacific Avenue, Suite 1501 Tacoma, WA 98402 (253) 779-9200
Designated Agent:	Corporation Service Company 9360 Glacier Highway, Suite 202 Juneau, AK 99801

Stationary Source Process Description

SIC Code of the Stationary Source: 3086 -- Expandable Polystyrene Manufacturing

[18 AAC 50.040(j)(3), 12/3/05; 18 AAC 50.326(a), 12/1/04]
[40 C.F.R. 71.5(c)(1 & 2), 7/1/04]

Section 2. Emission Unit Inventory and Description

Emission units listed in Table A have specific monitoring, recordkeeping, or reporting conditions in this permit. Emission unit descriptions and ratings are given for identification purposes only.

Table A – Emission Unit Inventory

ID	Emission Unit Name	Emission Unit Description	Rating/Size	Install Date
Boilers				
1	Boiler #1	Cleaver Brooks Natural Gas Fired Boiler	150 hp	1994
2	Boiler #2	ABCO Natural Gas Fired Boiler	75 hp	1985
Molds and Presses				
3	Block Mold	TRI Block Mold (16”), Model # TRI 2001	553 lb/hr	1971
4	Koehler Shape Press	Koehler Shape Press, Model # PF950662	212 lb/hr	1982
5	Styromatic Shape Press #1	Styromatic Shape Press, Model # SMP140-1000	75 lb/hr	1995
6	Styromatic Shape Press #2	Styromatic Shape Press, Model # SMP140-1000	75 lb/hr	2005
Pre-Expanders				
7	Welser Continuous Expander	Welser Continuous Expander, Model # VN300	NA	1988
8	AMD Batch Pre-expander	AMD Batch Pre-expander, Model # P2000D	NA	1999
Aging Bags				
9	Aging Bags	Aging Bags (13 each)	37,500 ft ³	1985

[18 AAC 50.326(a), 12/1/04]
[40 C.F.R. 71.5(c)(3), 7/1/04]

Section 3. State Requirements

Visible Emissions Standards

1. **Industrial Process and Fuel-Burning Equipment Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment including EU IDs 1 and 2 listed in Table A, or an incinerator to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.040(j), 12/3/05; 18 AAC 50.326(j), 12/1/04; 18 AAC 50.055(a)(1), 10/1/04]
[40 C.F.R. 71.6(a)(1), 7/1/04]

Particulate Matter Emissions Standards

2. **Industrial Process and Fuel-Burning Equipment Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment, including EU IDs 1 and 2 listed in Table A, to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.040(j), 12/3/05; 18 AAC 50.326(j), 12/1/04; 18 AAC 50.055(b)(1), 10/1/04]
[40 C.F.R. 71.6(a)(1), 7/1/04]

Sulfur Compound Emission Standards Requirements

3. **Sulfur Compound Emissions.** In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from an industrial process or fuel-burning equipment, including EU IDs 1 and 2 listed in Table A, to exceed 500 ppm averaged over three hours.

[18 AAC 50.040(j), 12/3/05; 18 AAC 50.326(j), 12/1/04; 18 AAC 50.055(c), 10/1/04]

Monitoring, Recordkeeping and Reporting

4. **Significant Emission Units.** For EU ID 1, burn only gas as fuel. Monitoring for this emission unit shall consist of a certification in each operating report under condition 34 that this emission unit fired only gas. Report under condition 33 if any fuel is burned other than gas.

[18 AAC 50.040(j), 12/3/05; 18 AAC 50.326(j), 12/1/04; 18 AAC 50.346(c), 10/1/04]
[40 C.F.R. 71.6(a)(3), 7/1/04]

5. **Insignificant Emission Units.** For EU ID 2 listed in Table A and for other emission units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply:

- 5.1 The Permittee shall submit the compliance certifications of condition 35 based on reasonable inquiry;
- 5.2 The Permittee shall comply with the requirements of condition 16;

5.3 The Permittee shall report in the operating report required by condition 34 if an emission unit is insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and actual emissions become greater than any of those thresholds;

5.4 No other monitoring, recordkeeping or reporting is required.

[18 AAC 50.346(b)(4), 10/1/04]

Section 4. General Conditions

Standard Terms and Conditions

6. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.
[18 AAC 50.326(j)(3), 12/1/04; 18 AAC 50.345(a) & (e), 10/1/04]
7. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[18 AAC 50.326(j)(3), 12/1/04; 18 AAC 50.345(a) & (f), 10/1/04]
8. The permit does not convey any property rights of any sort, nor any exclusive privilege.
[18 AAC 50.326(j)(3), 12/1/04; 18 AAC 50.345(a) & (g), 10/1/04]
9. **Administration Fees.** The Permittee shall pay to the department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-405.
[18 AAC 50.326(j)(1), 12/1/04; 18 AAC 50.400-405, 12/14/06]
[AS 37.10.052(b), 2000; AS 46.14.240 6/7/03]
10. **Assessable Emissions.** The Permittee shall pay to the department an annual emission fee based on the stationary source's assessable emissions as determined by the department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410(b). The department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year (TPY). The quantity for which fees will be assessed is the lesser of
 - 10.1 the stationary source's assessable potential to emit of 214 TPY; or
 - 10.2 the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the department, when demonstrated by
 - a. an enforceable test method described in 18 AAC 50.220;
 - b. material balance calculations;
 - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - d. other methods and calculations approved by the department.
[18 AAC 50.040(j)(3), 12/3/05; 18 AAC 50.326(j)(1), 12/1/04; 18 AAC 50.346(b)(1), 10/1/04;
18 AAC 50.410-420, 12/14/06]
[40 C.F.R. 71.5(c)(3)(ii), 7/1/04]

11. Assessable Emission Estimates. Emission fees will be assessed as follows:

11.1 no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the department can verify the estimates; or

11.2 if no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in condition 10.1.

[18 AAC 50.040(j)(3), 12/3/05; 18 AAC 50.326(j)(1), 12/1/04; 18 AAC 50.346(b)(1), 10/1/04;
18 AAC 50.410-420, 12/14/06]
[40 C.F.R. 71.5(c)(3)(ii), 7/1/04]

12. Good Air Pollution Control Practice. The Permittee shall do the following for EU IDs 1 and 3 – 9:

12.1 perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

12.2 keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and

12.3 keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.326(j)(3), 12/1/04; 18 AAC 50.030 & 50.346(b)(5), 10/1/04]

13. Dilution. The Permittee shall not dilute emissions with air to comply with this permit. Monitoring shall consist of an annual certification that the Permittee does not dilute emissions to comply with this permit.

[18 AAC 50.045(a), 10/1/04]

14. Reasonable Precautions to Prevent Fugitive Dust. A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.

[18 AAC 50.045(d) & 50.346(c), 10/1/04; 18 AAC 50.040(e), 12/3/05; 18 AAC 50.326(j)(3), 12/1/04]

14.1 The Permittee shall keep records of

a. complaints received by the Permittee and complaints received by the department and conveyed to the Permittee; and

b. any additional precautions that are taken

(i) to address complaints described in condition 14.1 or to address the results of department inspections that found potential problems; and

- (ii) to prevent future dust problems.

14.2 The Permittee shall report according to condition 16.

- 15. Stack Injection.** The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.

[18 AAC 50.055(g), 10/1/04]

- 16. Air Pollution Prohibited.** No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 5/26/72; 18 AAC 50.040(e), 12/3/05; 18 AAC 50.326(j)(3), 12/1/04;
18 AAC 50.346(a), 10/1/04]
[40 C.F.R. 71.6(a)(3), 7/1/04]

16.1 Monitoring, Recordkeeping, and Reporting for Air Pollution Prohibited:

- a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 33.
- b. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 16.

16.2 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

- a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of condition 16; or
- b. the department notifies the Permittee that it has found a violation of condition 16.

16.3 The Permittee shall keep records of

- a. the date, time, and nature of all emissions complaints received;
- b. the name of the person or persons that complained, if known;
- c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of condition 16; and

- d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

16.4 With each stationary source operating report under condition 34, the Permittee shall include a brief summary report which must include

- a. the number of complaints received;
- b. the number of times the Permittee or the department found corrective action necessary;
- c. the number of times action was taken on a complaint within 24 hours; and
- d. the status of corrective actions the Permittee or department found necessary that were not taken within 24 hours.

16.5 The Permittee shall notify the department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

- 17. Technology-Based Emission Standard.** If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard¹ listed in condition 19 (refrigerants), the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under condition 33 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under condition 33.

[18 AAC 50.235(a), 10/1/04; 18 AAC 50.040(j)(4), 12/3/05; 18 AAC 50.326(j)(4), 12/1/04]
[40 C.F.R. 71.6(c)(6), 7/1/04]

- 18. Asbestos NESHAP.** The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(1) & (2)(F), 12/3/05; 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 61, Subparts A & M, & Appendix A, 7/1/03]

- 19. Refrigerant Recycling and Disposal.** The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d), 12/3/05; 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 82, Subpart F, 7/1/03]

¹ *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

Section 5. General Source Testing and Monitoring Requirements

- 20. Requested Source Tests.** In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a) & 50.345(a) & (k), 10/1/04]

- 21. Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

[18 AAC 50.220(b), 10/1/04]

21.1 at a point or points that characterize the actual discharge into the ambient air; and

21.2 at the maximum rated burning or operating capacity of the emission unit or another rate determined by the department to characterize the actual discharge into the ambient air.

- 22. Reference Test Methods.** The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

22.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.220(c)(1)(A), 10/1/04; 18 AAC 50.040(a), 12/3/05]
[40 C.F.R. 60, 7/1/03]

22.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 12/3/05; 18 AAC 50.220(c)(1)(B), 10/1/04]
[40 C.F.R. 61, 7/1/03]

22.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c), 12/3/05; 18 AAC 50.220(c)(1)(C), 10/1/04]
[40 C.F.R. 63, 2/3/04]

22.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9.

[18 AAC 50.030, 5/03/02 & 50.220(c)(1)(D), 10/1/04]

22.5 Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(3), 12/3/05; 18 AAC 50.220(c)(1)(E), 10/1/04]

[40 C.F.R. 60, Appendix A, 7/8/04]

22.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

[18 AAC 50.035(b)(2), 12/3/05; 18 AAC 50.220(c)(1)(F), 10/1/04]

[40 C.F.R. 51, Appendix M, 7/1/03]

22.7 Source testing for emissions of any pollutant may be determined using an alternative method approved by the department in accordance with 40 C.F.R. 63, Appendix A, Method 301.

[18 AAC 50.040(c)(24), 12/3/05; 18 AAC 50.220(c)(2), 10/1/04]

[40 C.F.R. 63, Appendix A Method 301, 2/3/04]

23. **Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emission unit type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3), 10/1/04; 18 AAC 50.990(102), 12/3/05]

24. **Test Exemption.** The Permittee is not required to comply with conditions 26, 27 and 28 when the exhaust is observed for visible emissions by Method 9 Plan or Smoke/No Smoke Plan.

[18 AAC 50.345(a), 10/1/04]

25. **Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the department's appropriate division director or designee.

[18 AAC 50.345(a) & (l), 10/1/04]

26. **Test Plans.** Except as provided in condition 24, before conducting any source tests, the Permittee shall submit a plan to the department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emission unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under condition 20 and at least 30 days before the scheduled date of any test unless the department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

[18 AAC 50.345(a) & (m), 10/1/04]

27. **Test Notification.** Except as provided in condition 24, at least 10 days before conducting a source test, the Permittee shall give the department written notice of the date and the time the source test will begin.

[18 AAC 50.345(a) & (n), 10/1/04]

- 28. Test Reports.** Except as provided in condition 24, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall additionally certify the results in the manner set out in condition 30. If requested in writing by the department, the Permittee must provide preliminary results in a shorter period of time specified by the department.

[18 AAC 50.345(a) & (o), 10/1/04]

Section 6. General Recordkeeping and Reporting Requirements

Recordkeeping Requirements

- 29. Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

[18 AAC 50.326(j), 12/1/04]
[40 C.F.R 60.7(f), Subpart A, 7/8/04 & 71.6(a)(3)(ii)(B), 7/1/04]

- 29.1 copies of all reports and certifications submitted pursuant to this section of the permit; and
- 29.2 records of all monitoring required by this permit, and information about the monitoring including:
 - a. the date, place, and time of sampling or measurements;
 - b. the date(s) analyses were performed;
 - c. the company or entity that performed the analyses;
 - d. the analytical techniques or methods used;
 - e. the results of such analyses; and,
 - f. the operating conditions as existing at the time of sampling or measurement.

Reporting Requirements

- 30. Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

- 30.1 The department may accept an electronic signature on an electronic application or other electronic record required by the department if
 - a. a certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and
 - b. the person providing the electronic signature has made an agreement, with the certifying authority described in condition 30.1a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.205 & 50.345(a) & (j), 10/1/04; 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(3)(iii)(A), 7/1/04]

- 31. Submittals.** Unless otherwise directed by the department or this permit, the Permittee shall send two copies of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with condition 30.

[18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(3)(iii)(A), 7/1/04]

- 32. Information Requests.** The Permittee shall furnish to the department, within a reasonable time, any information the department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the department copies of records required to be kept by the permit. The department may require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200 & 50.345(a) & (i), 10/1/04; 18 AAC 50.326(a) & (j), 12/1/04]
[40 C.F.R. 71.5(a)(2) & 71.6(a)(3), 7/1/04]

33. Excess Emissions and Permit Deviation Reports.

[18 AAC 50.235(a)(2); 50.240(c); & 50.346(b)(2) & (3), 10/1/04; 18 AAC 50.326(j)(3), 12/1/04]]

- 33.1 Except as provided in condition 16, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

- a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report
 - (i) emissions that present a potential threat to human health or safety; and
 - (ii) excess emissions that the Permittee believes to be unavoidable;
- b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non routine repair that causes emissions in excess of a technology based emission standard;
- c. report all other excess emissions and permit deviations
 - (i) within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in conditions 33.1c(ii) and 33.1c(iii);
 - (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the department provides written permission to report under condition 33.1c(i); and

(iii) for failure to monitor, as required in other applicable conditions of this permit.

33.2 The Permittee must report using either the department's on-line form, which can be found at <http://www.dec.state.ak.us/air/ap/docs/adby/4notform.pdf>, or if the Permittee prefers, the form contained in Section 10 of this permit. The Permittee must provide all information called for by the form that is used.

33.3 If requested by the department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

34. Operating Reports. During the life of this permit², the Permittee shall submit to the department one original and one copy of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year. The Permittee, at their discretion, may submit one of the required two copies in electronic format (PDF or other department compatible image format).

[18 AAC 50.346(a), 10/1/04; 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(3)(iii)(A), 7/1/04]

34.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

34.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 33, either

a. The Permittee shall identify

- (i) the date of the deviation;
- (ii) the equipment involved;
- (iii) the permit condition affected;
- (iv) a description of the excess emissions or permit deviation; and
- (v) any corrective action or preventive measures taken and the date of such actions; or

b. When excess emissions or permit deviations have already been reported under condition 33 the Permittee may cite the date or dates of those reports.

² *Life of this permit* is defined as the permit effective dates, including any periods of reporting obligations that extend beyond the permit effective dates. For example if a permit expires prior to the end of a calendar year, there is still a reporting obligation to provide operating reports for the periods when the permit was in effect.

35. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the department one original and one copy of an annual compliance certification report. The Permittee, at their discretion, may submit one of the required two copies in electronic format (PDF or other department compatible image format).

35.1 Certify the compliance status of the stationary source over the preceding calendar year consistent with the monitoring required by this permit, as follows:

- a. identify each term or condition set forth in Section 3 through Section 8, that is the basis of the certification;
- b. briefly describe each method used to determine the compliance status;
- c. state whether compliance is intermittent or continuous; and
- d. identify each deviation and take it into account in the compliance certification;

35.2 In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.205 & 50.326(j), 12/1/04; 18 AAC 50.345(a) & (j), 10/1/04]

[40 C.F.R. 71.6(c)(5), 7/1/04]

36. NSPS and NESHAP Reports. The Permittee shall:

- 36.1 attach to the operating report required by condition 34, a copy of any NSPS and NESHAPs reports submitted to the EPA-Region 10; and
- 36.2 upon request by the department, notify and provide a written copy of any EPA-granted waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules.

[18 AAC 50.326(j)(4), 12/1/04; 18 AAC 50.040, 12/3/05]

Section 7. Permit Changes and Renewal

- 37. Emissions Trading.** No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.

[18 AAC 50.040(j)(4), 12/3/05; 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(8), 7/1/04]

- 38. Off Permit Changes.** The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 C.F.R. Part 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met:

[18 AAC 50.040(j)(4), 12/3/05; 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(12), 7/1/04]

- 38.1 Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;
- 38.2 Provide contemporaneous written notice to EPA and the department of each such change, except for changes that qualify as insignificant under 18 AAC 50.326(d) – (i). Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change;
- 38.3 The change shall not qualify for the shield under 40 C.F.R. 71.6(f);
- 38.4 The Permittee shall keep a record describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- 39. Operational Flexibility.** The Permittee may make changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions):
- 39.1 The Permittee shall provide EPA and the department with a notification no less than 7 days in advance of the proposed change.
- 39.2 For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.
- 39.3 The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to condition 39.

[18 AAC 50.040(j)(4), 12/3/05; 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(13), 7/1/04]

- 40. Permit Renewal.** To renew this permit, the Permittee shall submit an application under 18 AAC 50.326 no sooner than **December 2, 2011** and no later than **December 2, 2012**. **The renewal application shall be complete before the permit expiration date listed on the cover page of this permit.** Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 C.F.R. 71.7(b) and 71.5(a)(1)(iii).

[18 AAC 50.040(j)(3), 12/3/05; 18 AAC 50.326(c)(2) & (j)(2), 12/1/04]
[40 C.F.R. 71.5(a)(1)(iii), 71.7(b) & (c)(1)(ii), 7/1/04]

- 41. Permit Applications.** The Permittee shall send original applications for modification, or renewal of this permit and application addenda to the department's Anchorage office³. In addition, the Permittee may provide electronic copies of application documents; portable document format (PDF) or MS Word are acceptable formats.

[18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.7(a)(1)(i), 7/1/04]

- 42.** The Permittee shall submit to the EPA-Region 10 at the address specified in condition 35.2:

- 42.1 a copy of any application for modification or renewal of this permit, and application addenda, at the time the application or addendum is submitted to the department;
- 42.2 to the extent practicable, the Permittee shall provide applications in computer-readable format compatible with EPA's national database management system. In the interim until EPA implements such system, portable document format (PDF) or MS Word are acceptable formats.

[18 AAC 50.040(j)(7), 12/3/05; 18 AAC 50.326(b), 12/1/04]
[40 C.F.R. 70.10(d)(1), 7/1/04]

³ The current address for the Anchorage office is: ADEC, 619 East Ship Creek, Suite 249, Anchorage, AK 99501

Section 8. Compliance Requirements

General Compliance Requirements

- 43.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are

43.1 included and specifically identified in the permit; or

43.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.326(j)(3), 12/1/04; 18 AAC 50.345(a) & (b), 10/1/04]

- 44.** The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14.120(c), 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

44.1 an enforcement action;

44.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

44.3 denial of an operating permit renewal application.

[18 AAC 50.326(j)(3), 12/1/04; 18 AAC 50.345(a) & (c), 10/1/04]

- 45.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.326(j)(3), 12/1/04; 18 AAC 50.345(a) & (d), 10/1/04]

- 46.** The Permittee shall allow the department or an inspector authorized by the department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

46.1 enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

46.2 have access to and copy any records required by the permit;

46.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

46.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.326(j)(3), 12/1/04; 18 AAC 50.345(a) & (h), 10/1/04]

Compliance Schedule

- 47.** For applicable requirements with which the Insulfoam Facility is in compliance, the Permittee will continue to comply with such requirements.

[18 AAC 50.040(j), 12/3/05; 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(A), 7/1/04]

- 48.** For applicable requirements that will become effective during the permit term, the Permittee shall meet such requirements on a timely basis.

[18 AAC 50.040(j), 12/3/05; 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(B), 7/1/04]

Section 9. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the stationary source application, this section of the permit contains the requirements determined by the department not to be applicable to the Insulfoam Facility.

49. Nothing in this permit shall alter or affect the following:

49.1 The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or

49.2 The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

[18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(f)(3)(i) & (ii), 7/1/04]

50. Table B identifies the emission units that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table becomes applicable during the permit term, the Permittee shall comply with such requirements on a timely basis including, but not limited to, providing appropriate notification to EPA, obtaining a construction permit and/or an operating permit revision.

[18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(f)(1)(ii), 7/1/04]

Table B - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
1 - 2	40 C.F.R. 63 Subpart DDDDD for Industrial, Commercial, Institutional Boilers and Process Heaters	The stationary source is not HAP major.

Section 10. ADEC Notification Form⁴

Stationary Source Name

Air Quality Permit Number

Company Name

When did you discover the Excess Emissions/Permit Deviation?

Date: ____ / ____ / ____ Time: ____ : ____

When did the event/deviation occur?

Begin Date: ____ / ____ / ____ Time: ____ : ____ (please use 24-hr clock)

End Date: ____ / ____ / ____ Time: ____ : ____ (please use 24-hr clock)

What was the duration of the event/deviation? ____ : ____ (hrs:min) or ____ days

(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for Notification: (please check only 1 box and go to the corresponding section)

☐ Excess Emissions - Complete Section 1 and Certify.

☐ Deviation from Permit Condition - Complete Section 2 and Certify

☐ Deviations from COBC, CO, or Settlement Agreement - Complete Section 2 and Certify

Section 1. Excess Emissions

(a) Was the Exceedance: ☐ Intermittent or ☐ Continuous

(b) Cause of Event (Check one that applies):

☐ Start Up /Shut Down

☐ Natural Cause (weather/earthquake/flood)

☐ Control Equipment Failure

☐ Scheduled Maintenance/Equipment Adjustment

☐ Bad fuel/coal/gas

☐ Upset Condition

☐ Other _____

(c) Description:

Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emissions Units Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

EU ID	EU Name	Permit Condition Exceeded/Limit/Potential Exceedance

⁴ Revised as of August 24, 2006.

(e) Type of Incident (please check only one):

- ☐ Opacity _____ % ☐ Venting _____ (gas/scf) ☐ Control Equipment Down
☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Flaring
☐ Marine Vessel Opacity ☐ Other: _____

(f) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable? ☐ Yes ☐ No

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ Yes ☐ No

Certify Report (go to end of form)

Section 2 Permit Deviations

(a) Permit Deviation Type (check one only box, corresponding with the section in the permit):

- ☐ Emission Unit Specific
☐ Failure to monitor/report
☐ General Source Test/Monitoring Requirements
☐ Recordkeeping/Reporting/Compliance Certification
☐ Standard Conditions Not Included in Permit
☐ Generally Applicable Requirements
☐ Reporting/Monitoring for Diesel Engines
☐ Insignificant Emission Unit
☐ Record Keeping Failure
☐ Stationary Source Wide
☐ Other Section _____ (title of section and section number of your permit).

(b) Emission Unit Involved:

Identify the emission unit involved in the event, using the same identification number and name

EU	EU Name	Permit Condition / Potential Deviation

as in the permit. List the corresponding permit conditions and the deviation.

(c) Description of Potential Deviation:

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions:

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

To Submit this Report:

Fax to: 907-451-2187;

Email to: DEC.AQ.Airreports@alaska.gov - *if emailed, the report must be certified within the Operating Report required for the same reporting period per condition 34;*

Mail to: ADEC, Air Permits Program, 610 University Avenue, Fairbanks, AK 99709-3643;

Phone Notification: 907-451-5173 - *phone notifications require a written follow-up report within the deadline listed in condition 33; OR*

Online Submission: - *if submitted online, the report must be certified within the Operating Report required for the same reporting period per condition 34.*

**Alaska Department of Environmental Conservation
Air Permits Program**

**Insulfoam LLC
Insulfoam Facility**

**STATEMENT OF BASIS
of the terms and conditions for
Permit No. AQ1081TVP01**

**Prepared by Jim Plosay
May 1, 2008**

INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ1081TVP01.

STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit No. AQ1081TVP01 contains information on the stationary source, as provided in the Title V permit application.

The stationary source (i.e., the Insulfoam Facility) is owned and operated by Insulfoam LLC, and Insulfoam LLC is the Permittee for the stationary source's operating permit. The SIC code for this stationary source is 3086 -- Expandable Polystyrene Manufacturing.

The stationary source produces expandable polystyrene (EPS) blocks, boards, and shapes for use in building and construction materials. These blocks, boards, and shapes are produced from EPS resin beads containing pentane used as a blowing agent, using steam heated expansion and molding processes.

EMISSION UNIT INVENTORY AND DESCRIPTION

Under 18 AAC 50.326(a), the department requires operating permit applications to include identification of all emissions-related information, as described under 40 C.F.R. 71.5(c)(3).

The emission units at Insulfoam Facility that have specific monitoring, recordkeeping, and reporting requirements are listed in Table A of Operating Permit No. AQ1081TVP01, including two natural gas-fired boilers, and an EPS manufacturing process consisting of two pre-expanders, aging bags, block mold, Koehler shape press, and two Styromatic shape presses.

Table A of Operating Permit No. AQ1081TVP01 also contains specific information on each of the emission units that are regulated by this permit and provided in the application. The table is provided for informational and identification purposes only. Specifically, the emission unit rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

A summary of the potential to emit (PTE)¹ and assessable PTE is shown in Table C below.

¹ *Potential to Emit or PTE* means the maximum capacity of a stationary source to emit a pollutant under its physical or operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source, as defined in AS 46.14.990(23), effective 12/3/05.

Table C - Emissions Summary, in Tons Per Year (TPY)

Pollutant	NO _x	CO	PM-10	SO ₂	VOC	HAPs	Total
PTE	3.9	3.3	0.3	0.03	214.0	0.18	221.71
Assessable PTE	0	0	0	0	214.0	0	214.00

The assessable PTE listed under condition 10.1 is the sum of the emissions of each individual regulated air pollutant for which the stationary source has the potential to emit quantities greater than 10 TPY. The emissions listed in the table are estimates to be used for informational purposes only. The listing of the emissions does not create an enforceable limit to the stationary source.

The emission factors used by Insulfoam LLC to estimate emissions from EPS manufacturing are derived from data contained in the 1999 Technical Bulletin N840, *Pentane Emissions During Processing*. Insulfoam LLC determined the maximum throughput of the stationary source based on production records (i.e., block mold is 553 pounds per hour (lb/hr), Koehler shape press is 212 lb/hr, and Styromatic shape presses are 150 lb/hr). Thus, the overall maximum hourly production rate is 915 lb/hr assuming all block and shape molding equipment can operate simultaneous. While this production rate is not based on design parameters, the department does believe it is a reasonable maximum. Additional data was supplied that implies that steam generating capacity may limit production capacity below this rate. Insulfoam LLC used the following assumptions in its emissions calculations: (1) 100 percent production from high pentane beads; and (2) four weeks on-site storage with 20 percent loss for blocks and 37 percent loss for shapes.

EPS Block Production VOC Emissions (includes emissions from pre-expanders, aging bags, block molding, and storage):

$$553 \frac{\text{lb}}{\text{hr}} * 24 \frac{\text{hr}}{\text{day}} * 365 \frac{\text{day}}{\text{yr}} * 4.62 \frac{\text{lbVOC}}{100\text{lb}} \equiv 224,070 \frac{\text{lbVOC}}{\text{yr}} \equiv 112.0\text{tpy}$$

EPS Shape Production VOC Emissions (includes emissions from pre-expanders, aging bags, shape molding, and storage):

$$(212 \pm 150) \frac{\text{lb}}{\text{hr}} * 24 \frac{\text{hr}}{\text{day}} * 365 \frac{\text{day}}{\text{yr}} * 6.37 \frac{\text{lbVOC}}{100\text{lb}} \equiv 286,650 \frac{\text{lbVOC}}{\text{yr}} \equiv 101.9\text{tpy}$$

To calculate emissions from the boilers, Insulfoam LLC used AP-42 emission factors. For SO₂ emissions, the AP-42 emission factor assumes a sulfur content of 2,000 grains per MMscf.

Insulfoam LLC estimated hazardous air pollutants (HAPs) from the boilers using AP-42 emission factors. The department estimated HAPs from EPS manufacturing using emission

estimates from a California facility (i.e., Premier Industries) as permitted by the South Coast Air Quality Management District (i.e., 90 lbs/yr of HAPs per 95 TPY of VOC). HAP estimates were not included in the total in the table above because most HAPs are VOCs. The stationary source is not a major source of HAPs.

BASIS FOR REQUIRING AN OPERATING PERMIT

In accordance with 18 AAC 50.326(a), an owner or operator of a Title V source² must obtain a Title V permit consistent with 40 C.F.R. Part 71, as adopted by reference in 18 AAC 50.040.

This stationary source requires an operating permit because it is classified under 18 AAC 50.326(a) and 40 C.F.R. 71.3(a)(1) as a major stationary source that as defined in Section 302 of the Act, directly emits, or has the potential to emit, 100 TPY or more of any air pollutant.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

No previous air quality control permit-to-operate exists for the stationary source.

Title I (Construction and Minor) Permits

No Title I permits have been issued for the stationary source after January 18, 1997 (the effective date of the new divided Title V and Title I-permitting program).

Title V Operating Permit Application, Revisions, and Renewal History

Premier Industries, Inc. submitted an application for a Title V operating permit on December 20, 2006. The application was declared complete on February 15, 2007. Subsequent application material was submitted on May 7, 2007 to request a change in ownership from Premier Industries Inc. to Insulfoam LLC; and on June 11, 2007 with the installation dates of each emission unit, a statement that they do not conduct open burning at the stationary source, a statement that they do not use halon fire suppressants at the stationary source, and the hazardous air pollutant emission estimates; and on November 2, 2007 with data to support the assertion that the source's maximum capacity is limited by steam capacity.

COMPLIANCE HISTORY

Review of the permit files, indicate that the EPA-Region 10 issued a Notice of Violation (NOV) on October 12, 2006 for failure to submit a complete and timely Title V operating permit application and operating without a Title V operating permit (department enforcement tracking No. 06-0870-40-5914). To address the violations, Premier Industries Inc. and the department entered into a Compliance Order by Consent (COBC) No. 06-0870-50-5914 on December 28, 2006. The COBC authorized continued operation of the stationary source and imposed deadlines for submittal of a Title V operating permit application. The COBC will close the day after the department issues a written termination of the COBC at the request of Insulfoam LLC, if they have established to the reasonable satisfaction of the department that they have fully complied with the provisions of the COBC.

² *Title V source* means a stationary source classified as needing a permit under AS 14.130(b) [ref. 18 AAC 50.990(111)].

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The State and federal regulations for each condition are cited in Operating Permit No. AQ1081TVP01.

Condition 1, Visible Emissions Standard and MR&R

Applicability: This regulation applies to operation of all industrial processes and fuel-burning equipment in Alaska. EU IDs 1 and 2 are fuel-burning equipment. EU IDs 3 – 9 are industrial processes, although no visible emissions other than water vapor are reasonably expected from these units. The Alaska State Implementation Plan (SIP) standard for opacity applies because it is contained in the federally approved SIP effective September 13, 2007.

Factual Basis: Condition 1 requires the Permittee to comply with the federal and the State visible emission standards applicable to fuel-burning equipment. The Permittee shall not cause or allow the equipment to violate these standards.

Conditions 2, Particulate Matter (PM) Standard

Applicability: The PM standard applies to operation of all industrial processes and fuel burning equipment in Alaska. EU IDs 1 and 2 are fuel-burning equipment. EU IDs 3 – 9 are industrial processes, although no measurable particulate matter emissions are reasonably expected from these units. The Alaska State Implementation Plan (SIP) standard for PM applies it is contained in the federally approved SIP dated October 1983.

Factual Basis: Condition 2 requires the Permittee to comply with the State PM (also called grain loading) standard applicable to fuel-burning equipment. The Permittee shall not cause or allow fuel-burning equipment to violate this standard.

Condition 3, Sulfur Compound Emissions

Applicability: The sulfur emission standard applies to operation of all fuel-burning equipment and industrial processes in the State of Alaska. EU IDs 1 and 2 are fuel-burning equipment. EU IDs 3 – 9 are industrial processes, although no sulfur emissions are reasonably expected from these units. The SIP standard for sulfur dioxide applies because it is contained in the federally approved SIP dated October 1983.

Factual Basis: The condition requires the Permittee to comply with the sulfur compound emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow the affected equipment to violate this standard.

Condition 4 , Significant Emission Unit Monitoring, Recordkeeping and Reporting

Applicability: This condition applies to significant emission units that have potential emissions that could violate the state standards in conditions 1 - 3.

Factual Basis: Only EU ID 1 is a significant emission unit with potential emissions regulated by the State standards. The monitoring specified is the same monitoring specified in Standard Condition VIII for visible emissions and particulate matter from natural gas-fired units.

This same monitoring assures compliance with the sulfur emission standard in condition 3. Natural gas sulfur is measured as hydrogen sulfide (H₂S) concentration in ppm by volume

(ppmv). Calculations³ show that fuel gas containing no more than 4,000 ppm H₂S will always comply with this emission standard. This is true for all natural gases, even with no excess air.

Equations to calculate the exhaust gas SO₂ concentrations resulting from the combustion of natural gas were not included in this permit. Natural gas with an H₂S concentration of even 10 percent of 4,000 ppm is currently not available in Alaska and is not projected to be available during the life of this permit.

Condition 5, Insignificant Emission Unit Monitoring, Recordkeeping and Reporting

Applicability: This standard condition applies to insignificant emission units

Factual Basis: The state standards apply to insignificant emission units at this source. The source is required to have a permit only because of VOC potential emissions. The department has used the standard condition but has not reiterated the state standards as it would be particularly redundant in this permit.

Condition 5.1 requires certification that the units did not exceed State emission standards during the previous year and did not emit any prohibited air pollution.

Conditions 6 - 8, Standard Terms and Conditions

Applicability: Applies because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions required under 18 AAC 50.345(a) and (e)-(g) for all operating permits.

Condition 9, Administration Fees

Applicability: This condition requires the Permittee, owner, or operator to pay administration fees as set out in regulation. Paying administration fees is required as part of obtaining and holding a permit with the department or as a fee for a department action.

Factual Basis: The owner or operator of a stationary source who is required to apply for a permit under AS 46.14.130 shall pay to the department all assessed permit administration fees. The regulations in 18 AAC 50.400-405 specify the amount, payment period, and the frequency of fees applicable to a permit action.

Conditions 10 - 11, Emission Fees

Applicability: The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These standard conditions require the Permittee to pay fees in accordance with the department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air pollutant authorized by the permit (AS 46.14.250(h)(1)(A)). Air pollutant means any regulated air pollutant and any hazardous air pollutant. Therefore, assessable emissions under AS 46.14.250(h)(1)(A) means the

³ See ADEC Air Permits Web Site at <http://www.dec.state.ak.us/air/ap/docs/sulfgas.pdf>, under "Stoichiometric Mass Balance Calculations of Exhaust Gas SO₂ Concentration."

potential to emit any air pollutant identified in the permit, including those not specifically limited by the permit. For example, hydrogen chloride (HCl) emissions from an incinerator are assessable emissions because they are a hazardous air pollutant, even if there is currently no emission limit on HCl for that class of incinerator.

The conditions also describe how the Permittee may calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air pollutant. Therefore, fees based on actual emissions must also be paid on any pollutant emitted whether or not the permit contains any limitation of that pollutant.

This standard condition specifies that, unless otherwise approved by the department, calculations of assessable emissions based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match. The Permittee will normally pay for actual emissions - just with a one-year time lag.

Projected actual emissions may differ from the previous year's actual emissions if there is a change at the stationary source, such as changes in equipment or an emission rate from existing equipment.

If the Permittee does not choose to annually calculate assessable emissions, emissions fees will be based on the "potential to emit" (PTE).

The PTE set forth in the condition is based on natural gas fuel with a sulfur content of 2,000 grains per MMscf. If the actual sulfur content of the fuel is greater than these assumptions, the assessable emissions calculations provided by the Permittee should reflect the actual sulfur content. The change in these values may result in SO₂ emissions that could trigger PSD or other permitting requirements.

Condition 12, Good Air Pollution Control Practice

Applicability: Applies to all emission units, **except** insignificant emission units.

Factual Basis: The condition requires the Permittee to comply with good air pollution control practices for all emission units (except insignificant emission units).

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with appropriate maintenance. If appropriate maintenance is not applied to the equipment, the department may have to apply more frequent periodic monitoring requirements (unless the monitoring is already continuous) to ensure that the monitoring results are representative of actual emissions.

The Permittee is required to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the department. The department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

Condition 13, Dilution

Applicability: This State regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

Factual Basis: The condition prohibits the Permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

Condition 14, Reasonable Precautions to Prevent Fugitive Dust

Applicability: Bulk material handling requirements apply to the Permittee because the Permittee will engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the stationary source.

Factual Basis: The underlying regulation, 18 AAC 50.045(d), requires the Permittee to take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air.

Condition 15, Stack Injection

Applicability: Stack injection requirements apply to the stationary source because the stationary source contains a stack or emission unit constructed or modified after November 1, 1982.

Factual Basis: The condition prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the emission unit or stack would need to be modified to accommodate stack injection.

Condition 16, Air Pollution Prohibited

Applicability: Air Pollution Prohibited requirements apply to the stationary source because the stationary source will have emissions.

Factual Basis: The condition prohibits the Permittee from causing any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

The Permittee is required to report any complaints and injurious emissions. The Permittee must keep records of the date, time, and nature of all complaints received and a summary of the investigation and corrective actions undertaken for these complaints and to submit copies of these records upon request of the department.

The department will determine whether the necessary actions were taken. No corrective actions are necessary if the complaint is frivolous or there is not a violation of 18 AAC 50.110, however this condition is intended to prevent the Permittee from prejudging that complaints are invalid.

Condition 17, Technology-Based Emission Standard

Applicability: Technology Based Emission Standard requirements apply to the stationary source because the stationary source contains equipment subject to a technology-based emission standard, such as BACT, MACT, LAER, NSPS or other “technologically feasible” determinations.

Factual Basis: The Permittee is required to take reasonable steps to minimize emissions if certain activity causes an exceedance of any technology-based emission standard in this permit. The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with condition 33. Excess emission reporting under condition 33 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under condition 33.

Condition 18, Asbestos NESHAP

Applicability: The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

Factual Basis: The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

Condition 19, Refrigerant Recycling and Disposal

Applicability: Applies if the Permittee engages in the recycling or disposal of certain refrigerants.

Factual Basis: The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F that will apply if the Permittee uses certain refrigerants. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with this federal regulation.

Condition 20, Requested Source Tests

Applicability: Applies because this is a standard condition to be included in all permits.

Factual Basis: The Permittee is required to conduct source tests as requested by the department. Monitoring consists of conducting the requested source test.

Conditions 21 - 23, Operating Conditions, Reference Test Methods, Excess Air Requirements

Applicability: Apply because the Permittee is required to conduct source tests by this permit.

Factual Basis: The Permittee is required to conduct source tests as set out in conditions 21 through 23. These conditions supplement the specific monitoring requirements stated

elsewhere in this permit. Compliance monitoring with conditions 21 through 23 consists of the test reports required by condition 28.

Condition 24, Test Exemption

Applicability: Applies when the emission unit exhaust is observed for visible emissions.

Factual Basis: As provided in 18 AAC 50.345(a), 5/03/02, the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

Conditions 25 - 28, Test Deadline Extension, Test Plans, Notifications and Reports

Applicability: Apply because the Permittee is required to conduct source tests by this permit.

Factual Basis: Standard conditions 18 AAC 50.345(l) - (o) are incorporated through these conditions. These standard conditions supplement specific monitoring requirements stated elsewhere in this permit. The source test itself monitors compliance with this condition.

Condition 29, Recordkeeping Requirements

Applicability: Applies because the Permittee is required by the permit to keep records.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide an evidence of compliance with this requirement.

Condition 30, Certification

Applicability: This is a standard condition to be included in all permits. Applies because every permit requires the Permittee to submit reports.

Factual Basis: This condition requires the Permittee to certify all reports submitted to the department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be **certified** with the stationary source report, even though it must still be **submitted** more frequently than the stationary source operating report. This condition supplements the reporting requirements of this permit.

Condition 31, Submittals

Applicability: Applies because the Permittee is required to send reports to the department.

Factual Basis: This condition requires the Permittee to send submittals to the address specified in this condition. Receipt of the submittal at the correct department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of this permit.

Condition 32, Information Requests

Applicability: Applies to all Permittees and incorporates a standard condition.

Factual Basis: This condition incorporates a standard condition in regulation, which requires the Permittee to submit information requested by the department. Monitoring consists of receipt of the requested information.

Condition 33, Excess Emission and Permit Deviation Reports

Applicability: Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two State regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

In accordance with 40 C.F.R. 71.6(a)(3)(iii)(C), a deviation is not always a violation. For a situation lasting more than 24 hours, which constitutes a deviation, each 24-hour period is considered a separate deviation. "Deviation" as defined in 40 C.F.R. 71 means both "excess emission" and "permit deviation" as used in this permit, which includes:

1. a situation where emissions exceed an emission limitation or standard;
2. a situation where process or emissions control device parameter values indicate that an emission limitation or standard has not been met;
3. a situation in which observations or data collected demonstrate non-compliance with an emission limitation or standard or any work practice or operating condition required by the permit (including indicators of compliance revealed through parameter monitoring);
4. a situation in which any testing, monitoring, recordkeeping or reporting required by this permit is not performed or not performed as required;
5. a situation in which an exceedance or an excursion, as defined in 40 C.F.R. Part 64, occurs; and,
6. failure to comply with a permit term that requires submittal of a report.

In accordance with 18 AAC 50.990(34) "excess emissions" means emissions of an air pollutant in excess of any applicable emission standard or limitation which is item 1 of the above definitions from 40 C.F.R. 71. These definitions shall be considered in determining an "excess emissions" or "permit deviation" when reporting an occurrence using the ADEC notification form.

The reports themselves provide monitoring of whether the Permittee has complied with the condition.

Section 10, Notification Form

The department modified the notification form, deviating from standard permit condition IV, to more adequately meet the requirements of Chapter 50, Air Quality Control. The modification consisted of correcting typos and moving failure to monitor/report and recordkeeping to the permit deviations Section 2.

Condition 34, Operating Reports

Applicability: Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit. The reports themselves provide monitoring for compliance with this condition.

This condition was modified to allow the Permittee to submit one of the required two copies of the report electronically in lieu of paper. This change more adequately meets the requirements of 18 AAC 50 and agency needs provided the electronic version is compatible with ADEC software, as the department can more efficiently distribute the electronic copy to staff in other locations.

The department plans to adopt this change into a revised standard condition in the future.

Condition 35, Annual Compliance Certification

Applicability: Applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. The reports themselves provide monitoring for compliance with this condition.

The Permittee is allowed to submit one of the required copies electronically at their discretion. This change more adequately meets the requirements of 18 AAC 50 and agency needs, as the department can more efficiently distribute the electronic copy to staff in other locations.

Condition 36, NSPS and NESHAP Reports

Applicability: Applies to emission units subject to NSPS or NESHAP federal regulations.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60 and 40 C.F.R. 61. The reports themselves provide monitoring for compliance with this condition.

Conditions 37 - 39, Permit Changes and Revisions Requirements

Applicability: Applies because these are standard conditions to be included in all operating permits.

Factual Basis: These are conditions required in 40 C.F.R. 71.6 for all operating permits to allow changes within a permitted stationary source without requiring a permit revision.

The Permittee did not request trading of emission increases and decreases as described in 71.6(a)(13)(iii).

Condition 40, Permit Renewal

Applicability: Applies if the Permittee intends to renew the permit.

Factual Basis: In accordance with AS 46.14.230(a), this operating permit is issued for a fixed term of five years after the date of issuance, unless a shorter term is requested by the permit applicant. The Permittee is required to submit an application for permit renewal by the specific dates applicable to Insulfoam Facility as listed in this condition. As stated in 40 C.F.R. 71.5(a)(1)(iii), submission for a permit renewal application is considered timely if it is submitted at least six months but no more than eighteen months prior to expiration of the operating permit. According to 71.5(a)(2), a complete renewal application is one that provides all information required pursuant to 40 C.F.R. 71.5(c) and must remit payment of fees owed under the fee schedule established pursuant to 18 AAC 50.400. 40 C.F.R. 71.7(b) states that if a source submits a timely and complete application for permit issuance

(including renewal), the source's failure to have a permit is not a violation until the permitting authority takes final action on the permit application. Therefore, for as long as an application has been submitted within the timeframe allowed under 40 C.F.R. 71.5(a)(1)(iii), and is complete before the expiration date of the existing permit, then the expiration of the existing permit is extended and the Permittee has the right to operate under that permit until the effective date of the new permit. However, this protection shall cease to apply if, subsequent to the completeness determination, the applicant fails to submit by the deadline specified in writing by the department any additional information needed to process the application. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal.

Condition 41 - 42, Permit Applications

Applicability: Applies because the Permittee may need to submit permit applications

Factual Basis: This condition directs the Permittee to submit application materials to the department's Anchorage office. The current address at time of permit issuance is provided in a footnote because it is likely to change during the life of this permit. The current address can be obtained by contacting the department, checking the website, or by other reasonable means. The Permittee may submit copies of application materials in electronic formats compatible with ADEC software as the department can more efficiently distribute the electronic copy to staff in other locations. Condition 42 directs the applicant to send copies of all application materials directly to the EPA, in electronic format if practicable.

Conditions 48 - 48, General Compliance Requirements and Schedule

Applicability: Applies because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions for compliance required for all operating permits.

Conditions 49 - 50, Permit Shield

Applicability Applies because the Permittee has requested a shield for the applicable requirements listed under this condition.

Factual Basis: Table B of Operating Permit No. AQ1081TVP01 shows the permit shields that the department granted to the Permittee.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

RESPONSE TO COMMENTS

Owner Name: Insulfoam LLC

Permit No. AQ1081TVP01

Public Comment Closing Date: March 17, 2008

Source Name: Insulfoam Facility

The public comment period for the Insulfoam LLC, Insulfoam Facility operating permit closed on March 17, 2008. Comments were received from Insulfoam LLC and appear exactly as submitted. This paper provides ADEC's responses to the comments.

1. Section 1, Identification of Designated Agent

From Insulfoam LLC: The designated agent for the facility should be changed to:

Corporation Service Company
9360 Glacier Highway, Suite 202
Juneau, AK 99801

Response from ADEC: ADEC has made the requested changes.

2. Condition 16.4, Addresses Requirement to Notify the Department of Corrective Action not taken within 24 hours of a Complaint

From Insulfoam LLC: Condition 16.4 would make more sense if it was placed after condition 16.5.

Response from ADEC: Condition 16, Air Pollution Prohibited, is a standard condition adopted by reference in 18 AAC 50.346(a). Therefore, the department denies the request to edit the condition.

3. Condition 20, Addresses Discretionary Source Testing Requirements that may be Imposed by the Department

From Insulfoam LLC: This condition does not appear to be consistent with the requirements of Title V. Regulation 18 AAC 50.200 (correction - 220) states, in part, "The department will, in its discretion, require an owner, operator, or permittee of a source to conduct air contaminant emission tests to determine compliance with AS 46.14 and this chapter." However, the Title V permit, by definition, is required not only to list all requirements that are applicable to a source, but also all necessary compliance demonstration requirements. If source testing is required for compliance demonstration purposes, it is not discretionary to the department, and must be explicitly listed as a condition in the Title V permit. Please clarify or remove this condition.

Response from ADEC: Condition 20, Requested Source Tests, is a standard condition from 18 AAC 50.345(k), which requires an owner, operator, or permittee to conduct source testing as requested by the department to determine compliance with applicable permit requirements. Whereas 18 AAC 50.220(a), Enforceable Test Methods, grants the department authority to require an owner, operator, or permittee to conduct air pollutant emission tests to determine compliance with AS 46.14 and this chapter. Therefore, these regulations work in tandem. If source testing is not required by the permit for compliance demonstration purposes for a specific emission unit, the department reserves the right to request a source test for due cause. As such, the department denies the request to remove this condition.

4. Conditions 31, 34, and 35, Report Submittal Requirements

From Insulfoam LLC: Please clarify these requirements: If electronic certification is provided in accordance with condition 30, are only single, electronic copies of reports required? Or is one hard copy required in addition to the electronic copy?

Response from ADEC: *Although the statement of basis explained the intent of these conditions, the department updated conditions 34 and 35 to state that the Permittee may submit one of the required two copies in electronic format. Hence, one hard copy is still required.*
